

NEPP is extremely busy preparing for the upcoming year, FY02. Below is a list of some of the many tasks that the NEPP Program will be working on, categorized by Project.

ELECTRONIC PARTS - (EPAR) - Choon Lee, Project Manager

Extreme Environments

*GRC, Extreme Environment Electronics and Packaging, Patterson

Reliability of Thin, Low/High K Dielectrics

*JPL, Advanced and Emerging Technologies, Petkov

Fibers, Modulators (IPPAQ)

*GSFC, Advanced and Emerging Technologies, Ott

Long Life Electronics

*JPL, Advanced and Emerging Technologies, Kim

MEMS (MOEMS, RF) Reliability

*JPL, Advanced and Emerging Technologies, Wellman

Reliability of RF Devices

*JPL, Advanced Interconnect Reliability, Leon

Optoelectronics Reliability

*LaRc, Advanced Interconnect Reliability, Riggins

System-on-a-Chip, ASIC Design for Reliability

*JPL, System on a chip (SOC) and System in a package (SIAP) Reliability, Perret

SEMATECH

*JPL, Advanced and Emerging Technologies, Smith

Cu Metallization Reliability

*JPL, Advanced Interconnect Reliability, Leon

FPGAs for NASA Space Systems - Lee

-High Density FPGA Qualification

*JPL, Development of Innovative Qualification Methods, Roosta

-Reliability Evaluation of FPGAs for Space Applications

*GSFC, Advanced and Emerging Technologies, Katz

-Value of Post Programming Burn-in

*GSFC, Advanced and Emerging Technologies, Katz

Reliability of Laser Arrays

*LaRC, Advanced Interconnect Reliability, Riggins

Enabling Insertion of COTS in NASA Systems - Shaw

-PEMs Qualification Methods, Necessity for Upscreening, Guideline Support

*GSFC, Advanced and Emerging Technologies, Sharma

ELECTRONIC PACKAGING (EPAC) - Phil Zulueta, Project Manager

Enabling Reliability Through Board-Level Qualification - Zulueta

- [Chip-on-Board Reliability](#)
 - *JPL, Advanced Interconnect Methods, Bolin
- [Reliable Board Level Screening Methods](#)
 - *GSFC, Development of Innovative Qualification Methods, Shaw
- [Reworkable Underfill Characterization](#)
 - *JPL, Advanced Interconnect Methods, Ghaffarian
- [Embedded Passive Devices Technology](#)
 - *JPL, Substrates and Embedded Packaging Technologies, Gerke
- [Reliability Assessment of Board Microvias for Spaceborne Electronics](#)
 - * JPL, Substrates and Embedded Packaging Technologies, Mih

Enabling Insertion of COTS in NASA Systems - Zulueta

- [COTS MEMS Sensors/Accelerometers Quality & Reliability Characterization](#)
 - *JPL, COTS, MEMS/MOEMS, Reliability and Assurance; Ghaffarian
- [Reliability of COTS PEMs](#)
 - *GSFC, Newly Available Technologies and COTS, Sharma

MOEMS Interconnect Reliability

- *JPL, MEMS/MOEMS Reliability and Assurance, Ghaffarian

Packaging and Reliability Assessment of Electronic Noses

- *JPL, Advanced Sensors, Ramesham

Interconnect Reliability of Cold Electronics

- *JPL, Extreme Environments, Ramesham

Packaging for High Temperature SiC Based Electronics and MEMS Pressure Sensors

- *GRC, Extreme Environments, Chen

Characterization of Optical Fiber Cables for Space Flight

- *GSFC, Photonic Systems and Devices, Ott

Packaging Evaluation of High Power Laser Diode Arrays

- *LaRC, Photonic Systems and Devices, McGee

IPPAQ - System-in-a-Package/System-on-a-Chip Technologies

- *JPL, Development of Innovative Qualification Methods, Ghaffarian

Reliability of NASA Langley Research Center Macro-Fiber Composite (LaRC-MFC) Actuators

- *LaRC, Advanced Sensors, Bockman

ELECTRONIC RADIATION CHARACTERIZATION (ERC) - Ken LaBel, Project Manager

Enabling Insertion of COTS in NASA Systems - LaBel

-Extension of Flight Project Tests

*GSFC, Newly Available Technologies and COTS, Howard

-Radiation Hardness Assurance for Linear Devices

*JPL, Radiation Hardness Assurance, Pritchard/Poivey

-Radiation Characterization, Test Techniques, Guidelines for COTS

*JPL, Radiation Hardness Assurance, Scheick/Ladbury

-Development of Improved Radiation Qualification Methods

*JPL, Development of Innovative Qualification Methods, McClure/Ladbury

Radiation Websites

*JPL, Radiation Hardness Assurance, McClure/Ladbury

High Energy Fac - IPPAQ

*GSFC, Advanced and Emerging Technologies, Reed

Radiation Test of SiGe High Speed Devices

*GSFC, Advanced and Emerging Technologies, Reed

Assessment of Sensor Tech

*GSFC, Advanced Sensors/Detectors, Marshall

Emerging Photonic Devices and Data Links

*GSFC, Photonic Systems and Devices, Marshall/Johnston

Flight Data and Anomaly Analysis

*GSFC, Advanced and Emerging Technologies, Poivey/Pritchard

Radiation Test Guidelines for Optocoupler

*GSFC, Photonic Systems and Devices, Johnston/Reed

Emerging CMOS Microelectronics

*JPL, Advanced and Emerging Technologies, Patterson/Xapsos

Rad Qualification for Extreme Environments

*JPL, Extreme Environment Electronics and Packaging, Irom

Radiation Effects in New Device Dielectrics

*JPL, Advanced and Emerging Technologies, Scheick

Characterization of Ultracapacitors

*JSC, Radiation Hardness Assurance, Beverly/Scheick

Terrestrial Radiation Effects

*JPL, Radiation Hardness Assurance, Johnston